Appendices

Appendix-A

Publications

Thesis related Publications:

1. Talambedu Usha, Arvind Kumar Goyal, **Derhasat Narzary,** Dhivya Shanmugarajan, Sushil Kumar Middha* (2018) "Identification of bioactive glucose-lowering compounds of methanolic extract of *Hodgsonia heteroclita* fruit pulp". Frontiers in Bioscience, Landmark, 23, 875-888, IF: 2.49.

2. Talambedu Usha, Sushil Kumar Middha, **Derhasat Narzary**, Birendra Kumar Brahma, Arvind Kumar Goyal* (2017) "*In silico* and *in vivo* based scientific evaluation of traditional anti-diabetic herb *Hodgsonia heteroclita* fruit pulp used by *Bodo* tribe in India". Bangladesh Journal of Pharmacology. 12: 165-66. IF: 0.616.

3. **Derhasat Narzary**, Birendra Kumar Brahma, Dhirasree Talukdar, Junu Boro, Arvind Kumar Goyal, Usha T, Sushil Kumar Middha (2017). Phytochemicals and morpho-anatomical study of *Hodgsonia heteroclita*, encounter to district Kokrajhar, BTAD, Assam, North East, India. In SK Middha, AB Jolitha, M Kumari, S Saraswati (eds.) An integrated approach to diagnosis and therapy in Cancer. Pp 85-87 (ISBN: 978-81-925437-6-5).

4. **Derhasat Narzary**, Sushil Kumar Middha, Talambedu Usha, Birendra Kumar Brahma and Arvind Kumar Goyal*(2015) "Comparative evaluation of phytochemical constituents of rind, pulp, and seed of *Hodgsonia heteroclita* fruit encountered in Kokrajhar District, BTAD, Assam, India". World Journal of Pharmaceutical Research. 4(6): 1629-1636.

Other publications:

5. **Derhasat Narzary***, Birendra Kumar Brahma and Arvind Kumar Goyal(2014) "The flower and inflorescence of wild plants used as vegetables by the Bodo and allied tribes of Kokrajhar District, Assam, India". Advance Research in pharmaceuticals and Biologicals. 4(1) 618-621.

6. Birendra Kumar Brahma, Anusriti Basumatary, Jangila Basumatary, **Derhasat Narzary,** Neeta Mwsharary, Samir Jamatia, Pungbili Basumatary and Arvind Kumar Goyal*(2014) "Inventorying bamboo diversity of Kokrajhar District, BTAD, Assam, India with emphasis on its uses by the Bodos and allied tribes". International Journal of Fundamental & Applied Sciences. 3(3):30-34.

7. Arvind Kumar Goyal*, **Derhasat Narzary,** Sushil Kumar Middha and Talambedu Usha (2018). "Incidence of synchronous sporadic flowering of four different species of bamboos in Kokrajhar District, BTAD, Assam, India". International Journal of Fundamental and Applied Sciences.

Appendix-B

Seminar Presentations

Presentation-1:

Presentation in BIOENIGMA on the title– "**GCMS analysis of hydromethanolic extract of *Hodgsonia heteroclita* fruit pulp"** held at Maharani Ammanni College for Women, Bengaluru on 10th and 11th July 2015, organised by Life Science Association, MLACW, Bengaluru.

Presentation-2:

Presentation in North East Pharmaceutical Convention- 2017; on the title- **"Phytoconstituents and antioxidative potential of the *Hodgsonia heteroclita* fruit pulp found in the Kokrajhar District , BTAD, Assam, India",** held at Maniram Dewan Trade Centre, Guwahati, Assam on 6th and 7th May 2017, organised by Northeast Pharmaceutical Society (NEPS) and Girijananda Chowdhury Institute of Pharmaceutical Science (GIPS).

Appendix –C

Chemicals and Reagents Used

1, 1, 3, 3-tetramethoxypropane

2,2-diphenyl-1-picryl hydrazyl (DPPH)

Acetic anhydride

Acetonitrile

Alloxan monohydrate

Aluminum chloride ($AlCl_3$)

Ammonium hydroxide (NH_4OH)

Ascorbic acid

Benzene

Butanol

Butylated hydroxytoluene (BHT)

Chloroform

Conc. H_2SO_4

Conc. HCl

di-Potassium hydrogen phosphate (K_2HPO_4)

DMSO

DPX

ELISA Kit

Eosin blue

Epinephrine ammonium molybdate

Ethanol

Ethyl acetate

Ethylenediaminetetraacetic acid (EDTA)

Fehling's solution

Ferric chloride ($FeCl_3$)

Folin- Ciocalteu reagent

Gallic acid

Glacial acetic acid

Glibenclamide

Glutathione

Glutathione reductase

Haematoxylene

Hydrogen peroxide

Insulin (Insugen, Biocon, India)

Ketamine

Magnesium ribbon

Mayer's reagents

Methanol

Molisch's reagent

N,O-Bis (trimethylsilyl) trifluoro-acetamide (BSTFA)

NADPH

Paraffin wax

Potassium di-hydrogen phosphate (KH_2PO_4)

Potassium ferricyanide ($K_3Fe(CN)_6$)

Potassium hydroxide (KOH)

Pyridine

Quercetin

Reduced glutathione (GSH)

Sodium carbonate (Na_2CO_3)

Sodium chloride (NaCl)

Sodium dihydrogen phosphate

Sodium dodecyl sulphate (SDS)

Sodium hydroxide (NaOH)

Sodium nitrite ($NaNO_2$)

Standard rat pellet

t-butyl hydro-peroxide

Thiobarbituric acid (TBA)

Trichloroacetic acid (TCA)

Trimethyl chlorosilane (Me_3SiCl)

Xylazine

Xylene

Appendix-D

Equipments used

- Automatic tissue processor (Leica TP1020)
- Balance (Shimadzu, ATY224 Analytical Balance)
- Binocular Microscope (Labomed Lx500)
- Biospectrometer (Version 1.0.8 double beam; *ELICO* BL222)
- Centrifuge (RV/FM, super spin, Plastocraft, India)
- Deep freeze (White whale, WF-3046KSS and FORMA 700 Series
- ELISA (Thermo Scientific Multiskan GO).
- Hot air oven (Thermostatic RSTI-101)
- GCMS (Spectra Lab Scientific Inc. Perkin Elmer Autosystem XLGC Autosampler)
- Incubator (REMI CIS-24 *PLUS*)
- Lyophiliser (Telstar Lyoquest Freeze Dryer)
- Magnetic stirrer (REMI 5MLH)
- Micropipette – (Tarsons 1-10µl, 10 -100µl , 100-1000µl)
- Mixer grinder (Bajaj Rex 500)
- pH meter–(*ELICO* pH Meter LI617)
- Rotary evaporator (Superfit ROTA VAP Model: PBU-6D)
- Rotary microtome (Leica RM2125 RTS)
- Soxhlet apparus (BOROSIL)
- UV-VIS Spectrophotometer-117 (Systronics India Ltd)
- Ultra deep freezer -80°C (Blue star, CRESCENT)
- Water bath incubator shaker (REMI Model No.KWBS-2).